

claimed invention. A comparison with Table I from the current invention will reveal that none of the mutations disclosed in Parker et al are disclosed in the current invention. In fact, no mutations claimed in the current application fall within the specific "hotspots" described in Parker et al.

Furthermore, the examiner asserts that Parker et al. suggests and motivates the preparation and usage of hybridization probes to assay for such mutations and provides further motivation for the cloning and sequencing of COX genes for determination of mutations. Applicants respectfully traverse the rejection. The mutations of the instant application are not limited to the COX genes. The mutations disclosed in the current invention are found throughout the entire 16,569 bases of mitochondrial DNA. While some are located within the regions encoding the COX genes, many are not. Moreover, the Court, in *In re VAN DE VONDERVOORT*, 77 F.3d 422 found that the mere fact that a device or process utilizes a known scientific principle does not alone make that device or process obvious. The techniques described in Parker et al. were used specifically to detect mutations associated with genes which specifically segregated with Alzheimer's disease. Applicant's respectfully submit that the disclosure of techniques and mutations with Alzheimer's disease does not render the current invention of mutations located throughout the entire mitochondrial DNA obvious.

For at least the reasons stated above, applicants respectfully submit that the current rejection be removed and that all claims are allowable.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 408-731-5557.

Respectfully submitted,

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Gene	Codon Parker et al	Position of polymorphisms within codon	Base number (Cambridge numbering)	Base number (Anderson numbering)	Included in 08/856,376?	
COX I	131	1	6355	6295	no	
	155	1	6427	6367	no	
	167	1	6463	6403	no	
	178	2	6497	6437	no	
	193	2	6542	6482	no	
	194	1	6544	6484	no	
	415	1	7207	7147	no	
	COX II	20	7705	7645	no	
COX II	22	2	7711	7651	no	
	68	1	7848	7788	no	
	71	2	7858	7798	no	
	74	1	7866	7806	no	
	95	1	7929	7869	no	
	110	1	7974	7914	no	
	146	1	8082	8022	no	
	COX III	82	?	9511-9513	9451-9453	no
		247	?	10016-10018	9946-9948	no